

C. Remarks

Based on the amendments and remarks that follow, reconsideration of this application and entry of this amendment under Rule 116 is respectfully requested. This amendment is properly enterable under rule 116 as it places this application in condition for allowance.

This amendment is in response to the office action dated April 17, 2008. In the office action, claims 1, 3-5, 11-12 and 24-27 were rejected under 35 U.S.C 103(a) as being obvious over Gilboa et al (hereinafter Gilboa) (US2004/0148586A1), in further view of Gupta et al. (hereinafter Gupta) (US 5913061). Further, claim 28 was objected to as being dependent on the rejected base claim but noted allowable if rewritten in independent form.

In response to the objections and rejections cited above, amendments that are required to make the claims allowable, have been made to the claims. Claims 25 and 27 - 28 have been cancelled without prejudice or disclaimer. Further, claims 1, 12 and 24 have been amended.

In response to a restriction requirement from USPTO, claims 13-23 had been withdrawn from the patent application. By this amendment the withdrawn claims have now been cancelled without prejudice or disclaimer. It is requested that Deposit Account No. 502158 be charged for any fee required for entry of this amendment.

Descriptions and Differences of the Claims from the Cited Art:

Claim 1 has been amended to include all the limitations of claims 27 and allowable claim 28 which have now been cancelled. The combined limitations of claims 1, 27 and 28 has been written in an independent form in claim 1 which is now allowable because as set forth in the 'Allowable Subject Matter' section of in the final office action. It is respectfully submitted that claim 1 is now patentable over Gilboa and Gupta.

Independent claim 24 is the computer program product variant of claim 1 and implements all of the steps of claim 1. Claim 24 has been amended similarly to claim 1, to include all the limitations of claims 27 and allowable claim 28. In the light of amendments made to claim 24, it also now constitutes allowable subject matter. Hence, it is respectfully submitted that claim 24 is now patentable over Gilboa and Gupta.

To more clearly define and distinctly claim the present invention from the cited art, and to particularly point out and distinctly claim the subject matter, independent claim 12 has been amended to include the limitations of claim 27 and the limitations of allowable claim 28. The claim, as amended, recites a method for enabling an application designer and a user to develop a User Interface (UI) from UI models without coding (*claim 12, lines 1-3*).

As set forth in independent claim 12, a User Interface (UI) is developed from UI models without coding. The UI models are developed by using pre-built reusable components (*claim 12, lines 1-4*). The application designer identifies processes according to the requirements of the UI (*claim 12, clause (a), lines 1-2*). The tasks required to define the identified processes are defined. These tasks are defined by providing the meta-data to instances of a set of pre-built reusable components by using a visual modeling environment. This pre-built reusable component is an abstract object that is built to perform a function (*claim 12, clause (b), lines 1-5*). Further, the defined tasks are verified by applying a set of pre-defined verifications on each of the defined tasks (*claim 12, clause (c), lines 1-2*). Furthermore, the defined tasks are connected in a logical order by using the visual modeling environment. The defined tasks are connected to model the identified processes, which are used to develop UI models (*claim 12, clause (d), lines 1-4*). The developed UI models are stored in a database (*claim 12, clause (e), line 1*). The application designer and the user input requests while developing the UI (*claim 12, clause (f), lines 1-2*). These requests are transferred to an engine for processing (*claim 12, clause (g), line 1*). The pre-built reusable components that are required to process the requests are identified and cached (*claim 12, clause (h), lines 1-2 and claim 12, clause (i), line 1*). The tasks that are defined in the processes are executed in a logical order (*claim 12, clause (j), line*

1). Further, the visual verification of developed UI is performed (*claim 12, clause (k), lines 1-2*). The verification includes observing the values of watch variables while executing the UI models. The watch variables are identified by the application designer (*claim 12, clause (k), sub-clause (i), lines 1-3*). The verification further includes stopping at each break point while UI models are being executed. The break points are set by the application designer (*claim 12, clause (k), sub-clause (ii), lines 1-3*). At each of the break points, information related to the UI models is analyzed (*claim 12, clause (k), sub-clause (iii), lines 1-2*). The errors that occur during processing of requests are handled and information related to the execution of tasks is logged in the database (*claim 12, clause (l), lines 1-2 and claim 12, clause (m), line 1*). Further, the results of the execution are output (*claim 12, clause (n), line 1*).

In contrast, Gilboa discloses generation of a UI from UI models by translating the UI models to executable code. The code is generated automatically and not manually. On the other hand, the present invention describes the development of UI by executing the UI models, without generating any code. The UI models are developed by providing meta-data to the pre-built reusable components (*claim 12, lines 1-3 and claim 12, clause (b), lines 2-3*). Hence, the main feature in Gilboa is code generation, whereas the main feature in the present invention is modeling. Moreover, the present invention describes the engine to execute the UI models, whereas Gilboa does not disclose the engine for the execution of UI models.

Further, Gupta discloses a modular application collaborator for collaborating applications which perform distinct functions. On the other hand, the present invention describes the process of developing a user interface by modeling the pre-built reusable components. The objective of the present invention is to develop a user interface whereas the objective of Gupta is to integrate various applications. The development of UI in the present invention is not same as the collaboration of applications as disclosed in Gupta. Gupta discloses a collaborator that requires business objects models and a code is written for these business object models. On the other hand, the present invention requires UI models to develop UI without using any code (*claim 12, lines 1-3*).

Furthermore, the modular application collaborator in Gupta is based on the object models that are built by using the connectors and the application collaboration module. The connectors and the application collaboration modules in Gupta are defined in the terms of interfaces used for communication purposes with the applications. On the other hand, the UI in the present invention is based on the UI models that are built by using pre-built reusable components (claim 12, lines 1-4). The pre-built reusable components are not defined as interfaces as disclosed in Gupta. Hence, the object models in Gupta are not same as the UI models in the present invention. The application collaboration modules in Gupta require the programming language for their construction. For example, the application collaboration modules are constructed in Java. However, the pre-built reusable components in the present invention do not require any kind of programming language.

The object models of Gupta are executed by executing inter-operability functions that are specified in the related application collaboration modules and generate the corresponding object. The generation of objects is equivalent to code generation. However, the UI models of the present invention are executed by identifying the processes and executing the tasks that are specified in the identified processes in a logical order, without generating any code (claim 12, clause (a), lines 1-2 and claim 12, clause (j), line 1). Hence, the execution of tasks in the present invention is not same as the execution of an inter-operability function as disclosed in Gupta.

As noted above, claim 12 includes the limitations of claim 27 and the limitations of allowable claim 28. The combined limitations of claims 12 and 28 is allowable because Gilboa and Gupta do not teach a process of using watch variables to visually verify the developed interface and the variables being identified by the user and setting the stop points by the user and allowing the user to analyze the models for the user interface at each break point along with the modeling feature as set forth in claim 12, clauses (c) and (k) of the present application. Hence, in light of the amendments made to claim 12, it constitutes allowable subject matter and is patentable over Gilboa and Gupta.

Conclusion

In light of the amendments made to independent claim 1, dependent claims 3-5 and 11 are thus allowable. Further, in light of the amendments made to independent claim 24, dependent claim 26 is thus allowable. It is respectfully submitted that the amendments made to independent claims 1, 12 and 24 are sufficient to remove the rejections under 35 U.S.C. 103(a). Therefore, in light of the above, and in view of the amendments made to independent claims 1, 12 and 24, all of the dependent claims are also clearly patentable over Gilboa and Gupta.

The present claims have been amended to highlight the distinctions of the present invention over the cited art, and it is respectfully submitted that the claims are now clearly patentable over the art of record, and notice to that effect is earnestly solicited. If the examiner has any questions regarding this matter, the examiner is requested to telephone the applicant's attorney at the numbers listed below, prior to issuing a further action.

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Respectfully Submitted,

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